8/16/24-Port 10/100Mbps Fast Ethernet Switch

CE

User's Manual

73-0000165-00

FCC COMPLIANCE STATEMENT

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the instructions provided with the equipment, may cause interference to radio and TV reception. The equipment has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a commercial environment. However, there is no guarantee that interference will not occur in a particular installation.

If you suspect this equipment is causing interference, turn your switch on and off while your radio or TV is showing interference to determine the source of the interference.

You can try to correct the interference by one or more of the following measures:

1. Reorient the receiving radio or TV antenna where this may be done safely.
2. To the extent possible, relocate the radio, TV or the other receiver away from the equipment.
3. Plug the computer which has the equipment installed into a different power outlet so that equipment and the receiver are on different branch circuits.

If necessary, you should consult the place of purchase or an experienced radio/ television technician for additional suggestion.

CAUTION : The phone jack cannot be connected to telephone system.

Contents

1 Introduction

Congratulations on your purchase of this Fast Ethernet Switch. This high performance switch provides Fast Ethernet ports to segment network traffics, extend Fast Ethernet connection distance, and convert data packets between different transmission speeds.

The 8-Port model provides eight shielded RJ-45 ports, the 16-Port model provides sixteen shielded RJ-45 ports and the 24-Port model provides twenty four shielded RJ-45 ports. These are 10BaseT/100BaseTX Auto-negotiation ports.

This switch utilizes stored-and-forward switching architecture that filters and forwards data after the complete data packet is received and examined to be free of errors. With one set of status LEDs for each individual port, the switch operation status can be easily monitored.

The rackmount model can be mounted on the industrial standard 19 inches rack in the enterprise wiring center. The desktop model allows direct placing on the desktop.

This switch supports both full & half duplex on all ports which are able to provide 200Mbps of bandwidth to the connected devices, with auto-negotiation providing smooth migration from Ethernet to Fast Ethernet. This switch also support backpressure and IEEE 802.3x advanced flow control capability that can reduce congestion and prevent packet loss.

This switch offers the best way to relieve bandwidth bottlenecks and provide faster response times for networked users.

This switch is typically used to segment network traffics that can improve the network performance by increasing the total bandwidth as illustrated in Figure 1-1.

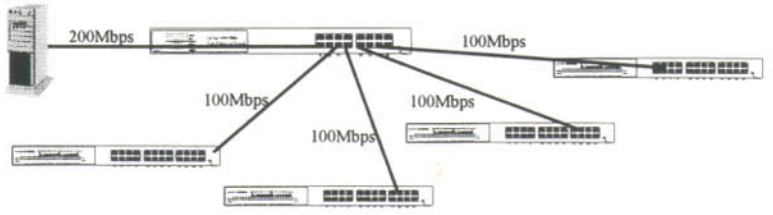


Figure 1-1 Increase network bandwidth

2 Features & Specifications

(1) Features

- Comply with IEEE 802.3 10BaseT Ethernet and 802.3u 100BaseTX Fast Ethernet standards.
- Simple and economical way to bridge 10BaseT network and 100BaseTX network.
- Easily connect and segment eight, sixteen or twenty four Fast Ethernet hubs or segments.
- IEEE 802.3x compliant flow control for full duplex and Backpressure for half duplex.
- All RJ-45 ports support 10BaseT/100BaseTX and Full-Duplex /Half-Duplex Auto-negotiation function.
- Support store-and-forward switching architecture.
- Two-year warranty

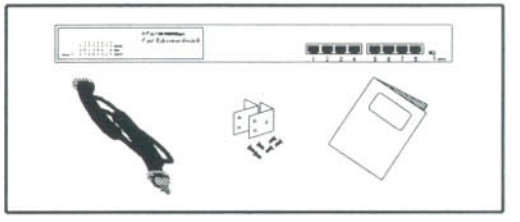
(2) Specifications

- Standards : IEEE 802.3 10BaseT and 802.3u 100BaseTX
- 10/100Mbps Ports : RJ-45 x 8 (8-Port Models),
  RJ-45 x 16 (16-Port Models)
  RJ-45 x 24 (24-Port Model)
- Switching Architecture : Store and Forward
- Filter/Forward Rate : 148,800 packets/sec.
- MAC Address : 8K
- Buffer : 0.5MB (8-Port Models), 1MB (16-Port Models), 1.5MB (24-Port Model)
- Nway Auto-negotiation : on all ports
- Full-Duplex/Half-Duplex : on all ports
- Switch LED : Power
- Port LEDs : LNK/ACT(Link/Activity), 100M, COL/FDX(Collision/Full Duplex)
- Dimensions : 440 x 201 x 45 mm / 17.3 x 7.9 x 1.75 inches (Rackmount Models)
  330 x 211 x 45 mm / 13.0 x 7.9 x 1.75 inches (Desktop Models)
- Weight : 2.1kg / 4.6 lb. (8-Port Rackmount Switch),
  2.4kg / 5.3 lb (16-Port Rackmount Switch)
  1.9kg / 4.1 lb. (8-Port Desktop Switch),
  2.1kg / 4.6lb. (16-Port Desktop Switch)
  2.6kg / 5.3lb. (24-Port Rackmount Switch)
- Power : 100~240V AC, full range internal power supply
- Operating Temperature : 32-131°F / 0-55°C
- Operating Humidity : 10-95% (Noncondensing)
- Emission : FCC Class A & CE Mark
- Warranty : Two years

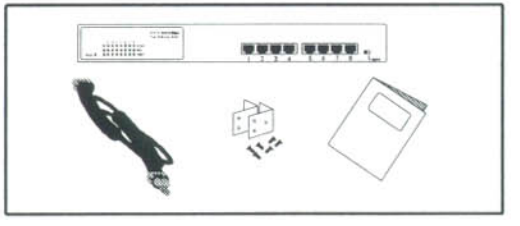
3 Package Contents

- One Fast Ethernet Switch
- One power cord
- One user's manual
- Rackmount accessories

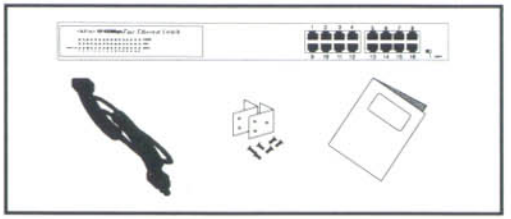
8-Port Rackmount
Fast Ethernet Switch



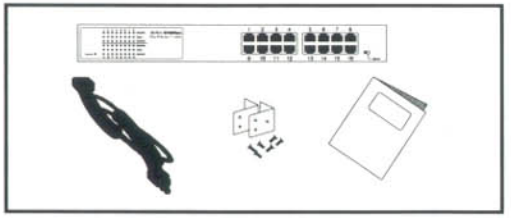
8-Port Desktop
Fast Ethernet Switch



16-Port Rackmount
Fast Ethernet Switch



16-Port Desktop
Fast Ethernet Switch



24-Port Rackmount
Fast Ethernet Switch

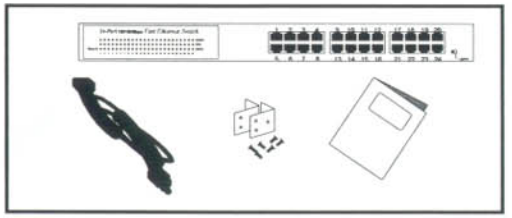


Figure 3-1 Package contents

4 Physical Description

(1) Panel

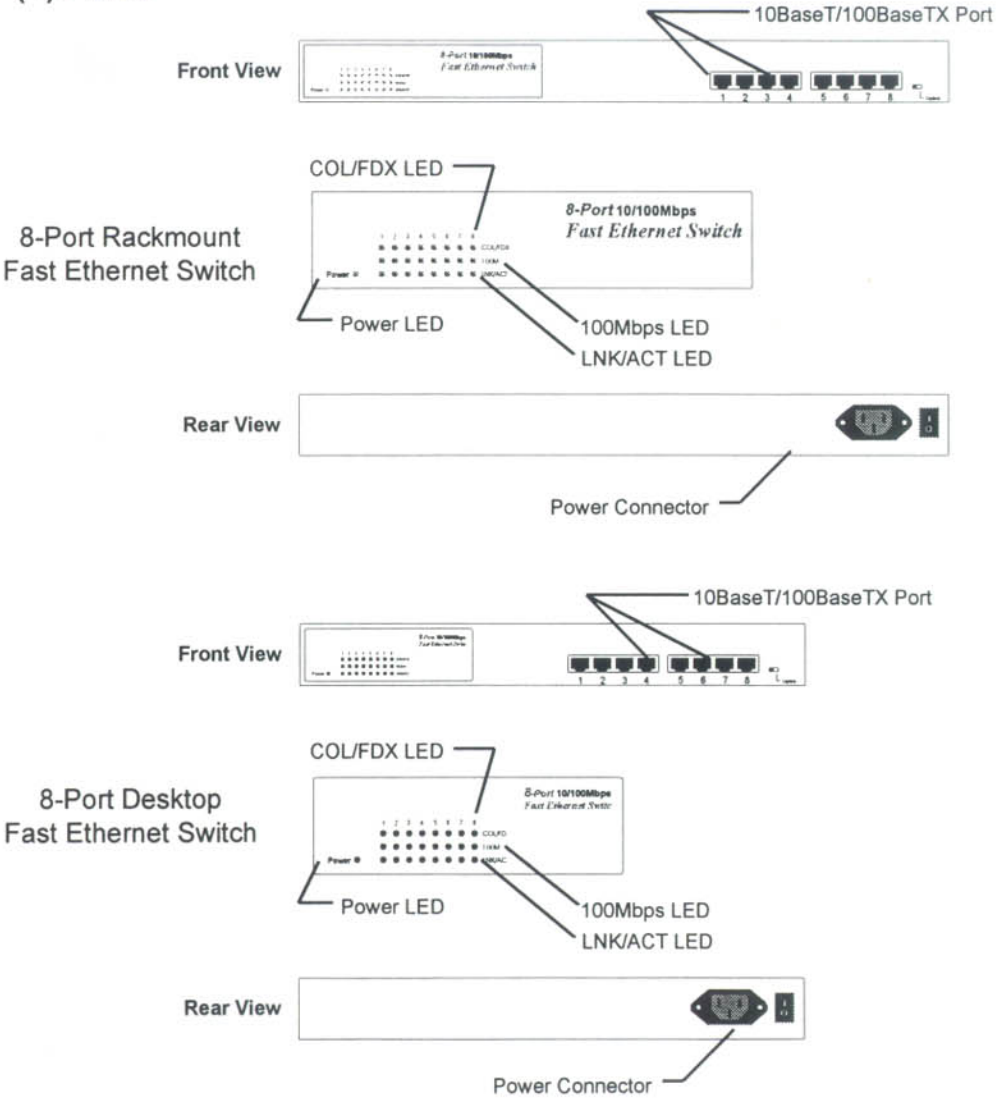


Figure 4-1 Panel description

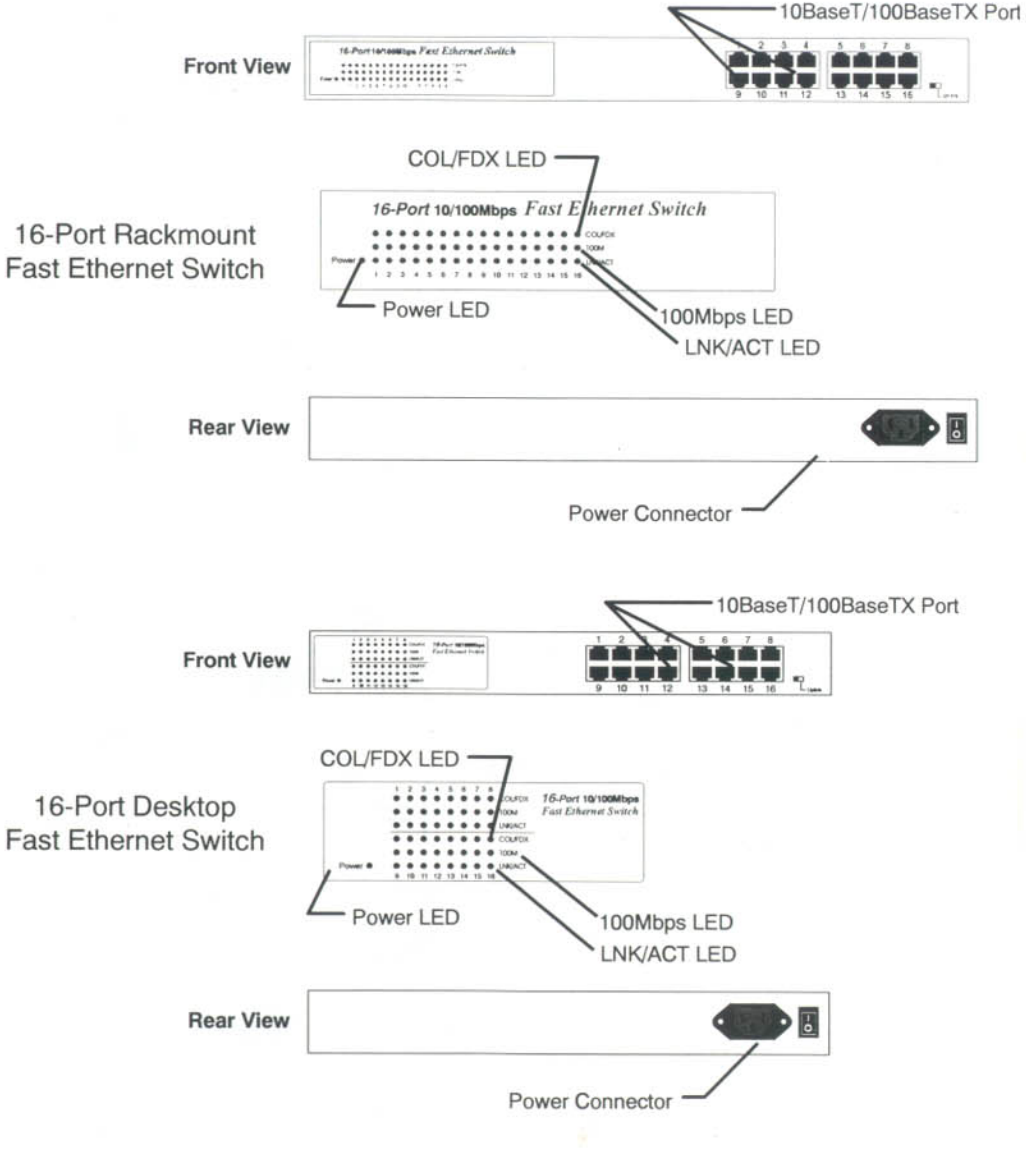


Figure 4-1 Panel description (continued)

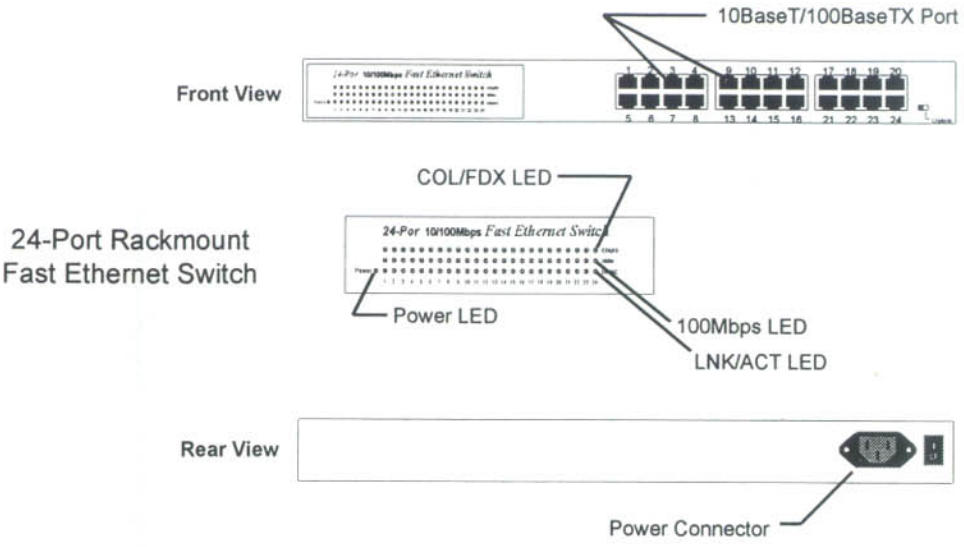


Figure 4-1 Panel description (continued)

(2) LED

LED	Color	Status	Description
PWR (Power)	Green	Lit	Power is supplied
		Off	No power
LNK/ACT (Link/Activity)	Green	Lit	A valid link is established
		Flash	Data packets received
		Off	No link is established
100M	Green	Lit	This port run at 100Mbps
		Off	Not connected or run at 10Mbps
COL/FDX (Collision/Full Duplex)	Yellow	Lit	This port run at Full Duplex
		Flash	Collision detected in this segment
		Off	No collision

Table 4-1 LED description

5 Installation

1. Operating Environment

This switch must be installed and operated within the limits of specified operating temperature and humidity (see previous section under Specifications). Do not place objects on top of the unit. Do not obstruct any vents at the sides of the unit. Do not position the unit near any heating source such as heater, radiator, or direct exposure to sun. Prevent entering of water and moisture into the unit. If necessary, use dehumidifier to reduce humidity.

2. Connecting to network devices

The RJ-45 ports on the switch are designed as MDI-X ports which allow using straight-through cables to connect this switch to workstation or hub's uplink port (MDI). A crossover cable must be used to connect the switch directly to a hub's regular port.

Connect one end of the network cable to the RJ-45 port on the front panel, and connect the other end of the network cable to the RJ-45 port on the network device. Follow the same procedure to connect all the RJ-45 ports of the switch. The UTP network cables must comply with EIA/TIA 568 specifications and Category 5 standard for 100Mbps data transmission. Maximum length, using UTP cable, between the switch and connected device is 100 meters (300ft). Once the network cable is connected to both ends and the attached network device is powered on, the green LNK/ACT LED should be lit.

An uplink slide switch is located right next to the last port of this switch allowing the last port to be configured as regular port(MDI-X) connecting to workstation, or as uplink port(MDI) connecting to another hub/switch. By shifting the uplink slide switch to uplink position, the last port becomes an Uplink port for easy connection to other hub's normal port using regular straight-through cables.

3. Connecting the power

Connect the power cord to the power socket on the rear panel of the unit. Connect the power cord to the power outlet and turn on power switch. The green Power LED on the front panel should be lit.

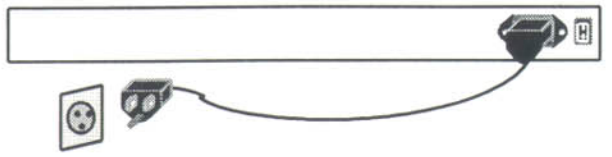


Figure 5-5 Connect the power cable

6 Trouble-shooting

1. Power LED is not lit

- Check if the power cord is properly connected to the power outlet and the hub. Make sure the power switch on the hub is turned ON.

2. 100M Link is not lit when connect to 100Mbps device

- Check the power switch of the network device attached to the switch; make sure it is turned ON.
- Check the network cable; make sure it is properly connected to the switch and the network device.
- Check the network cable; make sure the UTP cables comply with EIA/TIA 568 and Category 5 specification.
- If RJ-45 ports are used to connect to a hub, make sure you have connected to a uplink port and not an regular port. If RJ-45 ports are used to connect to a hub's regular port, make sure the crossover cable is used.

3. Collision LED flashes constantly

- Remove all the network cables; connect the cables back one by one to isolate the source of the collision.
- Check the network cable, inferior cable quality will result in excessive collision and error packets.

[!] Contact your dealer if problem persist.